

Boaz MWUBAHIMANA,

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My portfolio website: Click >> [link](#)
[LinkedIn network](#)

Research interest

Computer vision for Geophysical image processing (pixel-level scale), Geophysical image engineering, Geo~learning(Artificial intelligence). Remote sensing and deep learning for earth vision, visual perceptions, ensemble multimodal and multi-spatial/temporal image fusion and leveraging these skillsets for real world applications of classification, segmentation for large-scale land cover mapping.

Current projects:

1. Breaking barrier of spatial course resolution: national-scale mapping
2. Fused neural networks for robust and optimization of deep learning models in multiclass semantic segmentations from remotely sensed images.
3. Attention residual hybrid models for end-to-end automation of roads network.
4. Multimodal and multitemporal image fusion for enhancing satellite image semantic segmentations, perceptions from computer vision.

EDUCATION

- **Wuhan university at State key laboratory of information engineering, surveying, mapping and remote sensing** 2022- expected July2024
Master program of GeoInformatics in Photogrammetry and Remote Sensing engineering
- **University of Rwanda, College of Science and Technology**
BSc. Urban and Regional Planning 2017-2021
GPA – 3.5

PROJECTS: ACADEMIC AND FIELDS

- ✦ **Computer Vision and Digital image processing-2023, International Geomatic summer school of LIESMARS of Wuhan university.**
- ✦ **Geospatial technology and industry, 2023-Hi-Target-Guangzhou and LIESMARS of Wuhan university**
- ✦ **RADIANT EARTH FOUNDATION(USA), Radiant Machine Learning Hub boot comp 2021.** There was built models for crop type detection and crop yield prediction by use of deep learning techniques. The tasks includes classification and segmentation. [ReadMore.](#)
- ✦ **GEO University, Blog contest 2021,** “Full Cloud computing the time series of spatial correlation on distribution of vegetation and rainfall in Rwanda using Google Earth Engine” [ReadMore](#)
- ✦ **OMDNA, Omdena food security through Machine Learning challenge, Nakuru Kenya chapter-2021,** I was crop yield prediction Task lead [ReadMore](#)
- ✦ **UNIVERSITY OF CALIFORNIA Santa Barbara:** 3th of June 2021, International Research Poster competition entitled “Remote Sensing and Spatial temporal Mapping of Urban growth in the city of Kigali, Case study Kicukiro district Rwanda”. University of California Santa Barbara with International Association of young Geographers. [ViewThePoster](#)
- ✦ **RWANDA HOUSING AUTHORITY:** 2021, Urban planning division

- ★ **UNIVERSITY OF RWANDA: 18th of March, Impacts of Land Use and Land Cover Dynamics on Land Surface Temperature in a rapidly Urbanizing Cities, Kigali Rwanda.** Defended Bachelor's degree of Science Thesis. [ReadMore.](#)

FIELD: PROFESSIONAL EXPERIENCE

- Rwamagana district land use master plan-2022-2023, funded by Enable-German organization under supervision of Rwanda housing authority,

Position: GIS expert technical and Urban planner

- Kigali city Storm water master plan, 2022-2023,

Position: GIS expert

- **CGIS-Center for Geographical information systems and Remote sensing at University of Rwanda, College of science and Technology CST-former KIST** December 2021 – Present.

Position: Geospatial young researcher.

Experience: I was among trainers of Training prepared by the center for geographic information systems and remote sensing at University of Rwanda Staff, postgraduate

Students and some from RSA {[VisitWebsite.](#)}

29th of November to 3rd

December 2021.

- **GeoDR Hub-Geospatial development and Research Hub** July 2021-Present.
Position: Data Science and Machine Learning Lead {[VisitWebsite.](#)}
- **SuperMap Company, Beijing-China** July 2021-2022.
Position: SuperMap GIS BD Specialist for Rwanda {[VisitWebsite.](#)}
Position: Country director at SuperMap Company, we provide GIS software to high learning institutions and government organizations.

AWARD AND ARCHIEVEMENTS

- Computer vision and image processing
- **Cartography**, Professional communication of geospatial analysis Cartography, Professional communication of geospatial analysis by Esri.
- **Climate change adaptation** in food security and natural resources management Climate change adaptation in food security and natural resources management by **Wageningen University & Research Wageningen University & Research under OKP scholarship**, Issued Mar 2022 · No Expiration Date.
- Do it yourself, the development of GeoApp using Esri platform Do it yourself, the development of GeoApp using Esri platform Esri Issued Feb 2022 · No Expiration Date
- Certificate of “**Big geospatial data analytics with Google earth engine, 2021**” online course on June 11, 2021. [PreviewTheCourse](#)
- Certificate of “**2021 Complete Python Boot comp from Zero to Hero in Python Boot comp**” online course on June 11, 2021. [PreviewTheCourse](#)
- Do it yourself, Development of GeoApp using Esri products.
- Advanced cartography mapping, an online course by Esri 2022.
- Certificate of “**Geospatial Techniques in land productivity monitoring**” GMES and Africa and RCMID.
- **SuperMap international workshop** for geospatial analysis.
- Certificate of “**Role of urban governance in disaster risk assessment and management**” organized by Center for urban and built environment (CUBE) of SAIARD on June 2021.

- Certificate of Acceptance of Research paper entitled “Physical Accessibility Analysis to Health care services in Rwanda, case study Musanze district” to be published in **International Journal of Scientific**

& Engineering Research (IJSER), issued at 2 of April 2021.

- Certificate of “English for Career Development” University of Pennsylvania. [PreviewTheCertificate](#)

SKILLS

Geospatial Analytics	Technological Analytics
Deep learning for earth vision	Google earth engine, Cloud computing
Multimodal and multi-temporal image(aerial/Satellite) fusion	GIS: ArcMap, ArcGIS Pro, QGIS, SuperMap-Chinese GIS with AI integrated
Scalable Python for Data science and Machine Learning.	JavaScript programming.
Data engineering in Remote Sensing, leveraging big data,	Web development with JavaScript.
Binary and multiclass classification	UI/UX design
Large scale mapping	

Other skills
Graphic design CAD- Computer Aided design

RELEVANT EXPERIENCE

Toastmasters international Oct 2017 – Present *Public speaking, Leadership and communication*

- ☐ Attended weekly meetings, development of roles, presentations, Organization, preparation, evaluation of speeches and of speakers.

LANGUAGES

- ☐ English-Full Professional proficiency Kinyarwanda-Native or bilingual Proficiency

REFERENCES

Maurice Mugabowindekwe, PhD fellow, Copenhagen university,
Department of Geoscience and natural resources management, Denmark,

Phone: +4591857351

Email: mmu@ign.ku.dk, the author of “Nation-wide mapping of tree-level aboveground carbon stocks in Rwanda”

Gedeon MUHAWENAYO (MSc) in Machine intelligence,

Machine learning Research Engineer at Rwanda space agency

Research assistant at Arizona state university

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CERTIFICATES (COPIES)

All certifications, please Click here ➡ [link](#)